IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

REPLY BRIEF

Inventors	:	Oehrke, *et al.*
Serial No.	:	09/021,466
Filing Date	:	February 10, 1998
Title	:	SURVIVABLE AND SCALABLE DATA SYSTEM AND METHOD FOR COMPUTER NETWORKS

Group/Art Unit	:	2153
Examiner	:	Dinh, Dung C.
Docket No.	:	1177

RECEIVED

JUN 2 9 2004

Technology Center 2100

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In accordance with the provisions of 37 C.F.R. § 1.193(b)(1), Appellant submits this

Reply Brief in response to the Examiner's Answer mailed on April 20, 2004.

REMARKS

In the Examiner's Answer responding to Appellant's Supplemental Appeal Brief,

the Examiner maintains his rejections of claims 79-115 of the present application as either

anticipated by, or obvious over, the cited prior art. Appellant provides the following remarks in

response to the Examiner's Answer.

The Director is hereby authorized to charge any
additional amount required, or credit any overpayment,
to Deposit Account No. 19-4409.

I. Paragraph 11A of Examiner's Answer

With respect to representative claim 79 of the present application (and presumably each of the remaining claims), the Examiner admits that "Tanaka does not specifically disclose the survivability and scalability of the system." Rather, the Examiner simply dismisses Appellant's arguments that Tanaka does not anticipate the claimed invention on the basis that the survivability and scalability limitations are "recited in a wherein clause that merely describe a characteristic of the system. See claim 79 element (d)."

The Examiner's dismissal of the scalability and survivability limitations of the claimed invention on the basis that they are included in a "wherein" clause of the claims is not only troubling, it is directly at odds with established patent law. It is well established that patent claims must be viewed in their entirety, and not broken into a mere collection of parts. See Pac-Tec Inc. v. Amerace Corp., 14 U.S.P.Q.2d 1871 (Fed Cir. 1990). Specifically, in cases where limitations included within a "wherein" clause relate back to and clarify other elements of a claim, the wherein clause is a necessary part of the claim. See Griffin v. Bertina, 62 U.S.P.Q.2d 1431 (Fed Cir. 2002).

Such is the case here. The "wherein" clause of each of the rejected claims[1] adds limitations that relate back to and clarify the structure and capabilities set forth in prior elements of those claims. Thus, the Examiner's dismissal of the scalability and survivability limitations contained within the "wherein" clauses of the claims is improper. When the "wherein" clauses are properly considered, the claims of the present application are readily distinguishable from the

---

[1] In the final Office Action, the Examiner rejected claims 79-80, 82-88, 91-95, 98-99, 102-104, 106 and 108-114 under 35 U.S.C. § 102(e) as being anticipated by Tanaka. In the Examiner's Answer, it appears that this rejection has now been withdrawn with respect to claims 104, 106 and 108-114.

disclosure of Tanaka (which, as admitted by the Examiner, does not specifically teach scalability or survivability).

In a last attempt to justify his rejection of claim 79, the Examiner argues that "it is an inherent characteristic of Tanaka system that a new SCB can be added to the right side of the switch without adding a MSFS on the left side of the switch, and vice versa." Here, the Examiner is apparently confusing an *inherent* characteristic (*i.e.*, an *essential* characteristic) with a *possible* characteristic. While the video server of Tanaka *could* be designed and configured to permit the addition of a new SCB without adding a MSFS (using the teachings of the present application), there is no such *inherent* characteristic in the video server of Tanaka. In fact, Tanaka discloses that "the MSFS and SCB may be one unit." Tanaka, col. 17, ll. 34-35. Clearly, if the MSFS and SCB were one unit, it would be impossible to add a new SCB without adding a MSFS. Since Tanaka teaches that the MSFS and SCB may be one unit, the Examiner's contention that Tanaka teaches an *inherent* ability to separately add MSFSs or SCBs cannot be correct. Thus, the Examiner's hindsight attempt to read the teachings of the present application into Tanaka is completely misplaced.

As argued in detail in Appellant's Supplemental Appeal Brief, claims 79-80, 82-88, 91-95, 98-99, 102-104, 106 and 108-114 of the present application are not anticipated by Tanaka (which has absolutely no disclosure of scalability or survivability). Thus, the Examiner's rejection of these claims is improper and should be reversed.

II.   Paragraph 11B of Examiner's Answer

With respect to the survivability aspect of the data storage devices in claims 98 and 114 of the present application, the Examiner argues that "Tanaka teaches usage of SCSI disk array" and that "[i]t is well known in the art that disk array provides for redundancy and recovery

such that when one storage device failed, data is retrievable from the remaining operable storage devices." Not only is the Examiner's argument a misstatement of the state-of-the-art of disk arrays, it once again ignores the difference between an *inherent* feature of a device and a *possible* feature of a device. Disk arrays, in fact, do <u>not</u> *inherently* provide for redundant storage as argued by the Examiner.

Disk arrays are simply a configuration of multiple disk drives that have been grouped in a single location (usually in a cabinet or the like). The multiple disk drives within the disk array are interconnected so that they will appear as a single device to any other host device on the system. This configuration allows a disk array to be connected to a host device (such as a computer or server) to provide a tremendous amount of storage that can be easily accessed as a single device. This presents an advantage over the use of multiple individual disk drives in that only a single connection is required to connect the disk array to the host device (versus the multiple connections required to connect multiple individual disk drives to the host device). In addition, because the disk array may be accessed as a single device, there is no requirement that the host device keep track of which individual disk drive has stored the required data (as is necessary when using multiple individual disk drives).

A disk array, however, does <u>not</u> *inherently* provide redundant storage as argued by the Examiner. While a disk array *may* be configured such that some of the disk drives within the disk array contain data duplicative of data stored on other disk drives within the disk array, it is certainly <u>not</u> *inherent* that a disk array be so configured. As with most electronic and computer devices, disk arrays may be arranged and configured in various ways depending upon the needs of the user.

4

Tanaka teaches only the use of a SCSI disk array as a storage medium (SCSI is an acronym for Small Computer System Interface, which is a hardware interface protocol for interfacing various devices in small computer systems). Tanaka does <u>not</u>, however, disclose or teach any redundancy, back-up, or survivability capabilities. The absence of any mention whatsoever of redundant or back-up data indicates that survivability was not even a consideration in Tanaka, let alone an *inherent* feature of the storage devices of Tanaka. Had Tanaka anticipated redundant or back-up data, there would have been some disclosure of the use of RAID devices (Redundant Arrays of Inexpensive Disks) or some other indication of redundant data, back-up storage devices, or survivability. Because Tanaka is completely silent on this issue, the Examiner's rejection of independent claims 98 and 114 (and dependent claims 86-88, 99, 109, 103, 111 and 113) of the present application is improper and should be reversed.

III. Paragraph 11C of Examiner's Answer

With respect to the survivability aspect of the servers in representative claim 86 of the present application, the Examiner argues that "since, the SCB's [of Tanaka] are all identical, it is inherent that in an event where one of the SCB failed, subsequence [sic] requests would be processed by the remaining operable SCB's." Yet again, the Examiner is apparently confusing an *inherent* characteristic (*i.e.*, an *essential* characteristic) with a *possible* characteristic. While the video server of Tanaka *could* be designed and configured such that subscriber requests are redirected from a first SCB to a second SCB upon failure of the first SCB (using the teachings of the present application), there is no such *inherent* characteristic in the video server of Tanaka.

The survivability or redirection capability of a system is not a trivial matter, and requires coordination and communication between all of the individual devices of the system. Unlike the present application, there is absolutely no disclosure in Tanaka of the ability to

5

redirect subscriber requests from a first SCB to a second SCB in the event of a failure of the first

SCB, nor of how this redirection may be accomplished. In fact, a failure of one SCB in Tanaka

will result in the loss of service to those subscribers depending on that SCB. For example, as

shown in Fig. 8 of Tanaka, the subscribers on subscriber line 1 (SL1) depend on the operation of

SCB 3000. If SCB 3000 fails, those subscribers will not be able to retrieve video data from the

video server. The Examiner's suggestion that those subscribers would somehow be redirected to

another SCB (*e.g.*, SCB 3001, SCB 3002, etc.) relies on the teachings of the present application.

Clearly, survivability of the SCBs is not an *inherent* characteristic of the Tanaka video server.

Because Tanaka does not teach survivability as required in the claims of the present application,

the Examiner's rejection of independent claim 86 is improper and should be reversed.

IV.   Paragraph 11D of Examiner's Answer

With respect to claims 81 and 100 of the present application, the Examiner

supports his rejection on the grounds discussed above (namely, that Tanaka *inherently* discloses

the scalability and survivability aspects of the claimed invention). However, for the reasons

discussed above in Sections I, II and III of this Reply Brief, the Examiner's rejection of claims 81

and 100 is improper and should be reversed.

V.   Paragraph 11E of Examiner's Answer

Finally, with respect to claims 90, 97 and 101 of the present application, the

Examiner provides no rebuttal of Appellant's arguments against the impropriety of combining

the Tanaka and Peacock references. In fact, the Examiner states that the § 103 rejection against

claims 90, 97 and 101 was not based on the *combination* of Tanaka and Peacock -- "[t]he

rejection is not combining the system of Peacock per se to the system of Takana [sic]." Rather,

the Examiner states that "Peacock was cited to shown [sic] the obviousness of providing a load balancer so as to relieve an overloaded device."

Appellant is unclear as to the distinction the Examiner is attempting to make between combining Tanaka and Peacock (the basis of the Examiner's §103 rejection), versus using the Peacock reference to show the obviousness of providing a load balancer in Tanaka. However, as argued in its Supplemental Appeal Brief, Appellant maintains that Tanaka and Peacock are not properly combinable and do not alone or in combination disclose or suggest the scalability or survivability aspects of the claimed invention. Thus the Examiner's rejection of claims 90, 97 and 101 is improper and should be reversed.

<p style="text-align:center">*   *   *   *   *</p>

As argued in its Supplemental Appeal Brief and for the reasons stated above, Appellant respectfully submits that claims 79-115 of the present application are patentable over the cited references and should be allowed. Accordingly, Appellant respectfully requests that the Board reverse the Examiner's rejection of claims 79-115.

Respectfully submitted,

By: *Judith L. Carlson*
Judith L. Carlson, Reg. No. 41,904
STINSON MORRISON HECKER LLP
1201 Walnut Street, Suite 2800
Kansas City, MO 64141-6251
Telephone: (816) 842-8600
Facsimile: (816) 691-3495
Attorney for Appellant

7